

## COASTAL CONSERVANCY

Staff Recommendation

June 28, 2006

### **LOS PEÑASQUITOS LAGOON ENHANCEMENT – MONITORING PROGRAM AND ENHANCEMENT PLAN UPDATE**

File No. 78-046

Project Manager: Karen Bane

**RECOMMENDED ACTION:** Authorization to disburse an amount not to exceed \$250,000 to the Los Peñasquitos Lagoon Foundation to continue physical, chemical, and biological monitoring of Los Peñasquitos Lagoon and to update the Los Peñasquitos Lagoon Enhancement Plan.

**LOCATION:** Los Peñasquitos Lagoon, City of San Diego, County of San Diego

**PROGRAM CATEGORY:** Resource Enhancement

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#### **EXHIBITS**

Exhibit 1: Project Location and Site Map

Exhibit 2: Monitoring Program Summary 1987-2005

Exhibit 3: Previous Staff Recommendations 2004, 1996, 1991

Exhibit 4: Letters of Support

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#### **RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy (Conservancy) adopt the following resolution pursuant to Sections 31251 *et seq.* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of two hundred and fifty thousand dollars (\$250,000) to the Los Peñasquitos Lagoon Foundation to continue physical, chemical, and biological monitoring of Los Peñasquitos Lagoon and update the Los Peñasquitos Lagoon Enhancement Plan.

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed disbursement of funds is consistent with the purposes and criteria set forth in Sections 31251--70 of the Public Resources Code, regarding enhancement of coastal

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resources.

2. The proposed disbursement is consistent with the Los Peñasquitos Lagoon Enhancement Plan approved by the Conservancy on October 30, 1985.
3. The proposed disbursement is consistent with the City of San Diego North City Local Coastal Program certified by the Coastal Commission in 1988.
4. The proposed disbursement is consistent with the purposes of the Los Peñasquitos Special Deposit Fund established to provide for management of the lagoon.
5. The Los Peñasquitos Lagoon Foundation is a nonprofit organization existing under Section 501(c)(3) of the United States Internal Revenue Code, and has among its principal charitable purposes the restoration of Los Peñasquitos Lagoon, and the preservation of land for scientific, historic, educational, ecological, recreational, scenic or open space opportunities.”

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**PROJECT SUMMARY:**

Staff recommends that the Conservancy authorize the disbursement of up to \$250,000 to the Los Peñasquitos Lagoon Foundation (“Foundation”) to continue physical and biological monitoring of Los Peñasquitos Lagoon and to update the Los Peñasquitos Lagoon Enhancement Plan.

The recommended funding would ensure that the 19-year monitoring record at Los Peñasquitos Lagoon continues uninterrupted for an additional five years, at a minimum. The Los Peñasquitos Lagoon Enhancement Plan (Enhancement Plan), which the Conservancy approved in 1985, recommends a monitoring program “...to gauge the health and ecological value of the lagoon system...to document changes in the functional values of the lagoon...and to evaluate the success of the various elements of the enhancement program.” The monitoring program began in 1987 and includes assessments of vegetation, fish and invertebrate communities, and water quality. The program has resulted in a valuable record that is rare among southern California lagoons (Monitoring Program Summary 1987-2005, Exhibit 2).

The monitoring program has resulted in a consistent, long-term characterization of the lagoon that is crucial to the implementation of the Enhancement Plan. The monitoring results guide management actions by the Foundation, the California Department of Parks and Recreation (State Parks) and the City of San Diego. For example, opening the lagoon mouth is one of the actions in the Enhancement Plan. When monitoring results indicate stress to marine organisms in the lagoon, a contractor is hired to open the lagoon mouth to allow tidal flushing of the lagoon.

The effectiveness of enhancement projects in and around the lagoon may be assessed by comparing current monitoring results with the longer-term record. For example, sediment control is one of the elements described in the current Enhancement Plan. State Parks operates a sediment basin. A new sediment management basin upstream from the lagoon is currently being pursued by the Foundation based on a watershed hydrology study authorized by the Conservancy in 2001. By comparing future monitoring results with the long-term record, State Parks and the Foundation can assess the efficacy of the sediment basins and evaluate whether basin management should be adapted, more basins are needed, or a different strategy should be pursued.

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The monitoring record informs planning for future enhancements at the lagoon and for actions in the vicinity of the lagoon. The monitoring program has documented changes that may require the addition of enhancement proposals to the Enhancement Plan. Sedimentation from Carmel Valley Creek, at the northeast corner of the lagoon, is impacting lagoon habitats by allowing the spread of freshwater emergent vegetation such as cattails (*Typha* sp.) and bulrush (*Scirpus* sp.). In addition, a seagrass typically associated with freshwater influence, *Ruppia maritima*, has increasingly been observed at the lagoon, potentially altering lagoon function. The monitoring record may provide valuable information in light of the anticipated alterations to the lagoon environment. For example, continued construction of Interstates 5 and 805 could severely impact the lagoon in the next five years. Hopefully, the monitoring record will inform planning and design of the highway expansions to minimize impacts to the lagoon.

Staff, the Foundation, and other stakeholders have reviewed the monitoring program's design in light of developments at the lagoon since the last augmentation of the program. The Foundation plans to increase the use of geographic information systems (GIS) and remotely-sensed images in the monitoring work to map location and spatial extent of vegetation, including *Ruppia*. The Foundation will assess the feasibility of collecting nutrient and *coliform* data and develop appropriate sampling methodologies. In addition, they will begin measuring freshwater flow at the three tributaries into the lagoon, as this is a key factor influencing water quality parameters. The monitoring program will continue to evolve over the next couple years to integrate with the Wetlands Recovery Project's Integrated Wetlands Regional Assessment Program.

The Foundation would also use the proposed funding to update the Enhancement Plan. The trend in lagoon condition may be determined with the 19-year monitoring record. Recent studies of the hydrologic and hydraulic process in the watershed and lagoon provide insight into contributions to the status and trend of the lagoon's health and ecological value. Armed with this information, the Foundation can determine whether new issues such as freshwater inflow and new enhancements need to be incorporated into the Enhancement Plan.

**Site Description:** Los Peñasquitos Lagoon is a 0.62-square-mile intertidal wetland located in the north coastal area of the City of San Diego, about sixteen miles north of downtown, and just north of the intersection of Interstates 5 and 805, between the communities of La Jolla and Del Mar (Location map, Exhibit 1). It is one the few remaining intertidal wetlands in southern California. Much of the lagoon is owned and managed by California State Parks as the Los Peñasquitos Lagoon Preserve. The lagoon is adjacent to Torrey Pines State Park and Beach, which lie immediately to the west and south.

The 98.5-square-mile watershed of the lagoon is a rapidly urbanizing area of the City of San Diego and is comprised of three major drainages: Carroll Canyon, Los Peñasquitos Canyon and Carmel Canyon. Both the lagoon and its watershed have been identified by the State Water Resources Control Board as an impaired water body with sedimentation and siltation from nonpoint sources threatening habitats, particularly in the lagoon and lower stream corridors (see the **Final 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments** for the San Diego Regional Water Quality Control Board <http://www.waterboards.ca.gov/tmdl/docs/2002reg9303dlist.pdf>). The lagoon monitoring program has documented the rapid displacement of valued vegetation and fauna in the lagoon/stream interface from sedimentation. Projects are being prepared by the Foundation to

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manage sediment and reduce the impacts to the lagoon.

**Project History:** The Los Peñasquitos Lagoon Enhancement Plan approved by the Conservancy in 1985 provided for a monitoring program “...to gauge the health and ecological value of the lagoon system...to document changes in the functional values of the lagoon...and to evaluate the success of the various elements of the enhancement program.” The Foundation and the Pacific Estuarine Research Laboratory (PERL) at San Diego State University began the monitoring program in 1987 with a baseline study sampling adult and juvenile fishes, benthic invertebrates, vegetation and physio-chemical parameters within the lagoon. The monitoring sites and protocols used in the ongoing monitoring program were based on the initial study and recommendations. Subsequent changes have been made to the protocols and station locations based on an adaptive approach. This has allowed some level of consistency across time while also permitting better assessment of changing conditions, such as increases in freshwater inputs or shifting distributions of invasive species. Additionally the sampling methods have been developed to make results more comparable to ongoing monitoring at Tijuana National Estuarine Research Reserve (TRNERR), whose monitoring is part of a nationwide NOAA effort. The Tijuana Estuary makes an excellent reference location as the mouth of the reserve is rarely restricted as opposed to Los Peñasquitos Lagoon (LPL), which allows for comparisons between tidally-restricted and unrestricted systems.

The staff conducting the monitoring program has been consistent since its inception. Until 2004, PERL carried out the Los Peñasquitos Lagoon monitoring program under an agreement with the Foundation. Subsequently, PERL’s monitoring functions and core staff were transferred to the Southwest Wetlands Interpretive Association (“SWIA”). SWIA continues to carry out the Los Peñasquitos Lagoon monitoring program for the Foundation. SWIA is also conducting the NOAA-mandated monitoring of the Tijuana River National Estuarine Research Reserve (“TRNERR”). The Research Coordinator at the TRNERR, who is supported entirely by NOAA funds, will supervise the Los Peñasquitos Lagoon monitoring. The lagoon monitoring program will benefit from the active and growing Analytical and GIS laboratories based at the TRNERR.

Recent hydrologic and hydraulic studies of the watersheds and lagoon have complemented the data set from the monitoring program. In 2001, the Conservancy authorized a study of the hydrologic and hydraulic processes at the watershed-lagoon interface and within the lagoon. Completed in 2003, the study outlines new a suite of potential actions needed to carry out the purposes of the lagoon enhancement plan. Simultaneously, the Foundation conducted a separate study of the hydrologic and hydraulic processes in the three watersheds draining to the lagoon. Sediment management projects recommended by both studies are currently being pursued by the Foundation.

### **PROJECT FINANCING:**

Los Peñasquitos Lagoon Special Deposit Fund	\$250,000
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The Los Peñasquitos Lagoon Special Deposit Fund consists of fees assessed on development permits issued by the City of San Diego and the California Coastal Commission in the coastal zone portion of the Los Peñasquitos Lagoon enhancement area. These funds are held by the Conservancy and may be spent only for enhancement activities in Los Peñasquitos Lagoon. The proposed actions are consistent with the purposes of the fund because the monitoring program is

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an element of the enhancement plan for the lagoon as approved by the Conservancy and Coastal Commission in 1985. The Conservancy has supported the monitoring program since 1991 with an authorization from the fund in 1991 and subsequent augmentations in 1996 and 2004 (Previous Staff Recommendations, Exhibit 3).

**CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

The proposed action is consistent with Chapter 6 of the Conservancy's enabling legislation, Division 21 of the Public Resources Code Sections 31251-70. Consistent with Section 31251, the proposed action is part of a coastal resource enhancement plan and will provide information to enhance the natural and scenic character of an area that has been impacted by incompatible land uses. Consistent with Section 31252 the proposed action is identified in City of San Diego, North City Local Coastal Program as requiring public action to help resolve questions concerning impact of local development on natural resources. Pursuant to Section 31263, the Conservancy may authorize a nonprofit organization to undertake resource enhancement activities consistent with an approved resource enhancement plan for the area. Under Section 31263, the Conservancy may fund up to \$300,000 of the cost of preparing coastal resource enhancement plans. The Los Peñasquitos Lagoon Resource Enhancement Plan has been approved by the Coastal Commission, pursuant to Public Resources Code Section 31258 when it had jurisdiction, and the revised plan will be submitted to City of San Diego, pursuant to this section upon completion of the revisions to the enhancement plan.

**CONSISTENCY WITH CONSERVANCY'S  
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 5, Objective A** of the Conservancy's Strategic Plan, the project will provide information required to protect, restore and enhance the 0.62-square-mile Los Peñasquitos Lagoon intertidal wetland.

Consistent with **Goal 5, Objective B**, the project will provide information required to preserve and restore habitat corridors connecting the core habitat area along the coast with Los Peñasquitos Canyon Preserve and Carmel Valley habitat areas.

Consistent with **Goal 5, Objective C** the project will provide information required to design a project to eradicate non-native invasive species that threaten Los Peñasquitos Lagoon's native coastal habitat.

Consistent with **Goal 6, Objective B** the project will provide information required to design a project to improve water quality to benefit coastal resources.

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**CONSISTENCY WITH CONSERVANCY'S  
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

**Required Criteria**

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** Los Peñasquitos Lagoon remains a highly regarded natural area within the city. The community and public agencies concerned with the lagoon's management support the long-term monitoring program as a key element necessary to support management actions (Letters of Support, Exhibit 4).
4. **Location:** The proposed project is located within the coastal zone of the City of San Diego.
5. **Need:** The recommended action is needed to maintain the continuity and integrity of the monitoring program outlined in the Los Peñasquitos Lagoon Enhancement Plan adopted by the Conservancy in 1985. The cost of the monitoring program exceeds the financial capacity of the Foundation.
6. **Greater-than-local interest:** The monitoring program for Los Peñasquitos Lagoon provides insight into trends in condition of lagoons throughout Southern California and a source of monitoring methods that could be incorporated into monitoring programs at other estuaries and lagoons in the region. In fact, the Science Advisory Panel for the Southern California Wetlands Recovery Project recently recommended an Integrated Wetland Regional Assessment Program for estuarine wetlands. The monitoring program for Peñasquitos Lagoon will incorporate these recommendations.

**Additional Criteria**

7. **Urgency:** Funding is urgently needed to maintain the continuity of the 20-year monitoring program through the 2006-2011 monitoring period that commences in September.
8. **Resolution of more than one issue:** The monitoring program provides critical data for timing and executing actions required to maintain an open lagoon mouth, key data needed to inform management actions in the saltmarsh/riparian habitat interface, and information needed to develop future enhancement activities at the lagoon.
10. **Conflict resolution:** The long-term monitoring record is highly regarded by regulatory agencies in evaluating development proposals including: the I-5/I-805 widening project, the Pacific Coast Highway bridge replacement and the construction of sediment management basins in the lower watershed.
12. **Readiness:** Los Peñasquitos Lagoon Foundation and its subcontractor, Southwest Wetlands Interpretive Associates are currently managing the monitoring program and are prepared to act to maintain its continuity.

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**13. Realization of prior Conservancy goals:** “See “Project History” above.”

**CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

Biological monitoring at Los Peñasquitos Lagoon is consistent with the policies contained in the City of San Diego North City Local Coastal Program (LCP) effectively certified by the Coastal Commission in 1988. Specifically, the LCP states that: “A coastal restoration project should be undertaken with the Coastal Conservancy in order to properly establish the environmental management strategies necessary to enhance the natural viability of the Los Peñasquitos Lagoon.” (Torrey Pines Community Plan, LCP Addendum, 1981). An ongoing monitoring program is necessary to inform design of future restoration projects and evaluate the effectiveness of past restoration activities.

**COMPLIANCE WITH CEQA:**

With respect to the proposed monitoring activities, this authorization involves data collection, research and resource evaluation activities that do not result in disturbance to the environment. The project therefore is categorically exempt pursuant to Title 14, California Code of Regulations, Section 15306. With respect to review and revision of the enhancement plan, this authorization involves the development of planning studies for possible future actions which the Conservancy has not approved, adopted, or funded and which will require consideration of environmental factors in the development of the plan. Development of the plan does not create a legally binding obligation to carry out the activities assessed in the plan. It is therefore statutorily exempt pursuant to Title 14, California Code of Regulations, Section 15262.